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OCT 13 1971

STATE ENGINEER
SALEM, OREGON

"CERTIFICATE NO. 68458

Permit No. G-4946

see Special Order Vol. 49, p. 164
Permit still valid for 7.57 cfs
Partial Perfection of 8/17/71

APPLICATION FOR A PERMIT

To appropriate the Ground Waters of the State of Oregon

I, CITY OF BEND (Name of applicant)

of CITY OF BEND, county of DESCHUTES,
(Postoffice Address)

state of OREGON, do hereby make application for a permit to appropriate the following described ground waters of the state of Oregon, SUBJECT TO EXISTING RIGHTS:

If the applicant is a corporation, give date and place of incorporation

January 4, 1905, Bend, Oregon

1. Give name of nearest stream to which the well, tunnel or other source of water development is situated Deschutes River (Name of stream)

tributary of Columbia River

2. The amount of water which the applicant intends to apply to beneficial use is 16.04 cubic feet per second or 7200 gallons per minute. (See Attached Sheet)

3. The use to which the water is to be applied is Municipal Water Supply for the City of Bend

4. The well or other source is located ft. (N. or S.) and ft. (E. or W.) from the corner of Well #1 is 3007.14 ft. S. 58°04'01" E. from an iron pipe at the N.W. Corner of (Section or subdivision)

the N.E. 1/4, N.E. 1/4 Sec. 6, T. 18 S., R. 12 E.W.M. Additional wells planned in the N.W. 1/4, Sec. 5, T. 18 S., R. 12 E.W.M. (See Attached Sheet)
(If preferable, give distance and bearing to section corner)
(If there is more than one well, each must be described. Use separate sheet if necessary)

being within the NW 1/4 of Sec. 5, Twp. 18 S., R. 12 E., W. M., in the county of Deschutes

5. The Pipe Line (Canal or pipe line) to be 0.7 miles in length, terminating in the SE 1/4, SE 1/4 of Sec. 31, Twp. 17 S., R. 12 E., W. M., the proposed location being shown throughout on the accompanying map. (Smallest legal subdivision)

6. The name of the well or other works is Brooks Well Field

DESCRIPTION OF WORKS

7. If the flow to be utilized is artesian, the works to be used for the control and conservation of the supply when not in use must be described.

Not Applicable

8. The development will consist of 4 wells (Give number of wells, tunnels, etc.) having a diameter of 16 inches and an estimated depth of 900 feet. It is estimated that 700 feet of the well will require 16 inch steel casing. Depth to water table is estimated 548 (Feet)
(Kind)

An open 12 inch hole is planned from 700 to 900 ft.

ITEM # 2 Continued

Water to be appropriated from each well follows:

	C.F.S.	G.P.M.
Well #1	4.0106	1800
#2	4.0106	1800
#3	4.0106	1800
#4	<u>4.0106</u>	<u>1800</u>
TOTALS	16.0424	7,200

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#4. Location of wells all in the N.W. $\frac{1}{4}$, Sec. 5, T. 18 S., R. 12 E W.M. as follows:

Well #1 is 3007.14 ft. S. $58^{\circ}04'01''$ E. from an iron pipe at the N.W. corner of the NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 6, T. 18 S., R. 12 E. W.M. within SW $\frac{1}{4}$, NW $\frac{1}{4}$ sec. 5, T. 18 S., R 12 E. W.M.

Well #2 is 3419.16 ft. S. $55^{\circ}54'56''$ E. from an iron pipe at the N.W. corner of the NE $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 6, T. 18 S., R. 12 E. W.M. within SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec 5, T. 18 S., R. 12 E. W.M.

Well #3 is 2250.38 ft. S. $56^{\circ}32'59''$ E. from an iron pipe at the N.W. corner of the NE $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 6, T. 18 S., R 12 E. W.M. within NW $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 5, T. 18 S., R. 12 E. W.M.

Well #4 is 3277.36 ft. S. $76^{\circ}48'58''$ E. from an iron pipe at the N.W. corner of the NE $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 6, T. 18 S., R. 12 E. W.M. within NE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 5, T. 18 S., R. 12 E. W.M.

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CANAL SYSTEM OR PIPE LINE—

9. (a) Give dimensions at each point of canal where materially changed in size, stating miles from headgate. At headgate: width on top (at water line) feet; width on bottom feet; depth of water feet; grade feet fall per one thousand feet.

(b) At miles from headgate: width on top (at water line) feet; width on bottom feet; depth of water feet; grade feet fall per one thousand feet.

(c) Length of pipe, 3230 ft.; size at intake 16 in.; in size at ft. from intake in.; size at place of use 16 in.; difference in elevation between intake and place of use, +20 ft. Is grade uniform? No. Estimated capacity, Well No. 4 pipe length 1610 ft; size of intake 8 in.; size at 12.03 sec. ft. place of use 6 in.; difference in elevation between intake and place of use +13 ft. Grade not uniform. Estimated capacity 4.01 Sec. ft.

10. If pumps are to be used, give size and type ±1800 g.p.m. Vertical line shaft turbine depending on well tests.

Give horsepower and type of motor or engine to be used ±400 H.P. electric motor depending on well tests.

11. If the location of the well, tunnel, or other development work is less than one-fourth mile from a natural stream or stream channel, give the distance to the nearest point on each of such channels and the difference in elevation between the stream bed and the ground surface at the source of development Well field area closest approach to Deschutes River is 200 feet. Ground water source is estimated to be 548 feet below stream bed.

12. Location of area to be irrigated, or place of use City of Bend

Township N. or S.	Range E. or W. of Willamette Meridian	Section	Forty-acre Tract	Number Acres To Be Irrigated
18 S.	12 E.	3	NW 1/4 NW 1/4	40
		4	N 1/2 SW 1/4 N 1/2 except SE 1/4 NE 1/4	380
		5	SE 1/4 except SE 1/4 SE 1/4	120
17 S	12 E	27	SW 1/4 NW 1/4 - S 1/2 NW 1/4 NW 1/4; W 1/2 SW 1/4 except SE 1/4 SW 1/4 SW 1/4	130
		28	S 1/2 NE 1/4, SW 1/4 NW 1/4, NE 1/4 SE 1/4, S 1/2 SE 1/4, S 1/2 SW 1/4, NW 1/4 SW 1/4	360
		29	SE 1/4 NE 1/4, S 1/2 SW 1/4, E 1/2 SE 1/4, SW 1/4 SE 1/4, E 1/2 NW 1/4 SE 1/4	260
		30	S 1/2 SW 1/4, S 1/2 SE 1/4	160
		31	E 1/2 NW 1/4, N 1/2 NE 1/4 SW 1/4, SE 1/4, NE 1/4	420
		32	All	640
		33	All except SE 1/4 NE 1/4 and except NE 1/4 SE 1/4	560
		34	W 1/2 SW 1/4 SW 1/4, N 1/2 NW 1/4 NW 1/4	40
17 S	11 E	25	SE 1/4 SW 1/4, SE 1/4 except SW 1/4 SW 1/4 SE 1/4	190

(If more space required, attach separate sheet)

3200.0

Character of soil Sandy

Kind of crops raised Municipal domestic use and lawn irrigation

MUNICIPAL SUPPLY—

G 4946

13. To supply the city of Bend in Deschutes county, having a present population of 13,700 and an estimated population of 19,000 in 1980.

ANSWER QUESTIONS 14, 15, 16, 17 AND 18 IN ALL CASES

- 14. Estimated cost of proposed works, \$603,000.00
15. Construction work will begin on or before 1972
16. Construction work will be completed on or before 1978
17. The water will be completely applied to the proposed use on or before 1980
18. If the ground water supply is supplemental to an existing water supply, identify any application for permit, permit, certificate or adjudicated right to appropriate water, made or held by the applicant. 17.13 Cfs water rights held from Tumalo Irrigation District

Signature of Applicant: H. D. Wetke, Acting City Manager

Remarks:

This application is a first attempt by the City of Bend to obtain a deep well water supply adjacent to the City limits. The present surface supply must be supplemented to meet the growing demand, or a moratorium placed on the building increase currently in progress. Bid openings on Well #1 are scheduled on October 18, 1971. If uncorrectable deficiencies exist which would jeopardize this application, please telephone the City Manager by October 19, 1971.

STATE OF OREGON, County of Marion, ss.

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for

In order to retain its priority, this application must be returned to the State Engineer, with corrections on or before, 19

WITNESS my hand this day of, 19

STATE ENGINEER By ASSISTANT

STATE OF OREGON,
County of Marion, } ss.

PERMIT

★ 8.47 cfs issued Cert. 008758
see Special order Vol. 49, Page 164
Permit G-4946 is still valid for 7.57

This is to certify that I have examined the foregoing application and do hereby grant the same, SUBJECT TO EXISTING RIGHTS and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed 16.04 ^{7.57} cubic feet per second measured at the point of diversion from the well or source of appropriation, or its equivalent in case of rotation with other water users, from four wells being 4.01 cfs from each well

The use to which this water is to be applied is municipal use

If for irrigation, this appropriation shall be limited to of one cubic foot per second or its equivalent for each acre irrigated and shall be further limited to a diversion of not to exceed acre feet per acre for each acre irrigated during the irrigation season of each year;

and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The well shall be cased as necessary in accordance with good practice and if the flow is artesian the works shall include proper capping and control valve to prevent the waste of ground water.

The works constructed shall include an air line and pressure gauge or an access port for measuring line, adequate to determine water level elevation in the well at all times.

The permittee shall install and maintain a weir, meter, or other suitable measuring device, and shall keep a complete record of the amount of ground water withdrawn.

The priority date of this permit is October 13, 1971

Actual construction work shall begin on or before February 16, 1973 and shall

thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 1973...
Extended to Oct. 1, 1980 Extended to Oct. 1979

Complete application of the water to the proposed use shall be made on or before October 1, 1974...
Extended to Oct. 1, 1980 Extended to Oct. 1979 Extended to Oct. 1978

WITNESS my hand this 16th day of February, 1972

[Signature]

STATE ENGINEER

BC extended to 10-1-94, 10-1-99

BC - Extended to October 1, 1989

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PERMIT

TO APPROPRIATE THE GROUND WATERS OF THE STATE OF OREGON

This instrument was first received in the office of the State Engineer at Salem, Oregon, on the 13th day of October, 1971, at 8:00 o'clock A. M.

Returned to applicant:

Approved:

February 16, 1972

Recorded in book No. of

Ground Water Permits on page G-4946

CHRIS L. WHEELER
STATE ENGINEER

Drainage Basin No. 5 page 47

5500